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No. 80, Original

IN THE

Supreme Court of the United States

October Term, 1977

STATE OF COLORADO, *Plaintiff*

v.

STATE OF NEW MEXICO
AND TONEY ANAYA,
ATTORNEY GENERAL OF THE STATE OF
NEW MEXICO, *Defendants*

REPORT OF SPECIAL MASTER ON THE EQUITABLE APPORTIONMENT OF THE VERMEJO RIVER

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December 31, 1981

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I

Narrative Statement of the Evidence

In this action, the State of Colorado is seeking an equitable apportionment of the waters of the Vermejo River. New Mexico resists the diversion by the State of Colorado of any of the waters of this interstate river.

The Vermejo River is a non-navigable, interstate river which originates on the eastern slopes of the Sangre de Cristo Mountains in southern Colorado, just above the Colorado-New Mexico border. The area surrounding the origin of the river is

mountainous, uninhabited and inaccessible for a large part of the year. Ricardo Creek, Little Vermejo Creek and the North Fork of the Vermejo are the three main tributaries which combine to form the Vermejo River about one mile south of the Colorado-New Mexico border. Fish Creek joins Little Vermejo Creek in Colorado above the state line. Additional water is acquired from other small tributaries in New Mexico.

The Vermejo flows southeasterly from Colorado into New Mexico through rolling plains and plateau until it joins the Canadian River approximately four miles southwest of Maxwell, New Mexico.

The Colorado portion of the Vermejo drainage consists of approximately 25-30 square miles of land. Most of the drainage area is above 8500 feet. Snowmelt is the main source of water for the river, although some accretion to the stream-flow comes from summer rains and thunderstorms.

The Vermejo is virtually a closed system. Most of the water is consumed by various users and little, if any, of the water of the Vermejo reaches the Canadian River.

One of the major difficulties confronting the Special Master in this case is the lack of reliable streamflow measurements. There is only one active stream gauging station on the Vermejo which is operated by the U.S. Geological Survey. The gauge is located 1-½ miles above Dawson, New Mexico. It operated intermittently between 1916 and 1928 and regularly from 1928 to the present. The average annual flow for the entire recorded period according to the USGS records is 12,919 acre feet. After compiling the streamflow data recorded at the Dawson Gauge, both Colorado and New Mexico computed and used statistical averages in their exhibits and analysis. Colorado computed and used the figure of 11,035 acre feet as the average flow at the gauge, while New Mexico's computations resulted in a figure of 9,800 acre feet. The discrepancy and disagreement between the

two States occurred because different yearly time periods were used. Colorado used the years 1955-1979 and New Mexico used 1950-1978.

In addition to the Dawson Gauge records, one other set of fragmentary, incomplete measurements was available for consideration by the Special Master. In 1977, C. F. & I. Steel Corporation installed measuring devices on Ricardo Creek at two different points, at the proposed point of diversion and at the state line. A measuring device was also installed on Little Vermejo Creek at the state line. Actual measurements were taken during the years 1977-1980, inclusive. Unfortunately, the accuracy of the measurements is questionable. The evidence shows that the measuring gauges did not always measure the entire flow of the river because the water occasionally flowed around the gauges. At least one of the gauges was completely washed out. The gauges were not calibrated by the USGS, nor were the records reviewed by that same organization or by the State of Colorado. However, due to the nature and cause of the inaccuracy, the measurements provided by the devices are probably on the low side. According to the measurements which were actually taken between 1977 and 1980, 6900 acre feet were produced by Ricardo Creek and 1500 acre feet were produced by Little Vermejo Creek, for a total of 8400 acre feet. No measuring gauges were placed on the North Fork of the Vermejo, so the contribution of that tributary plus the inaccuracy of the measuring gauges just mentioned would appear to compel the conclusion that the estimate of 8400 acre feet for the Colorado production is somewhat low.

New Mexico used an altitude-runoff relationship in lieu of actual measurements to calculate the amount of water produced in Colorado. The figure derived from this statistical analysis was 5500 acre feet, some 2900 acre feet less than Colorado's estimate.

Although the actual measurements taken by C. F. & I. Steel Corporation are somewhat low, it would appear that the actual measurements are a more reliable indicator of the water produced in Colorado than the New Mexico altitude-runoff statistical analysis which is based upon rainfall in other areas and the subsequent calculation of probabilities.

At the present time, there are no appropriators of Vermejo water in Colorado. C. F. & I. Steel Corporation owns an inchoate water right entitling it to a diversion of 75 cubic feet per second. Of the 75 cubic feet per second allocated to C. F. & I. Steel Corporation, 45 cubic feet per second are to be diverted from Ricardo Creek, 25 cubic feet per second from Little Vermejo Creek and 5 cubic feet per second from Fish Creek.

There are four major appropriators of Vermejo waters in New Mexico. Above the Dawson Gauge, the Vermejo Park Corporation and Kaiser Steel Corporation divert Vermejo water. Below the Dawson Gauge, the Phelps Dodge Corporation and the Vermejo Conservancy District divert the remaining water. There are a few minor appropriators who also divert some water, but the four organizations just mentioned divert the major portion of the water. As noted earlier, very little, if any, water escapes from the diversion works of the Vermejo Conservancy District. The effect of a diversion in Colorado on those who live below the Vermejo Conservancy District would be negligible and virtually non-existent. There was no competent evidence of any dependency on Vermejo water by users downstream from the Vermejo Conservancy District and no calls have ever been made for the water by the downstream users.

After the Vermejo River leaves Colorado, the first diversion of water is taken by the Vermejo Park Corporation. Vermejo Park Corporation is a wholly owned subsidiary of Pennzoil Corporation. The property owned by Pennzoil through

Vermejo Park Corporation is used primarily for hunting, fishing and recreational activities. Pennzoil also operates a cattle operation on the property. The main crop grown on the land is hay for the cattle. Both States disagree on the number of acres irrigated by the corporation. Colorado maintains that only 250 acres, requiring approximately 500 acre feet of water, are irrigated. New Mexico, on the other hand, states that the acreage irrigated is limited only by the lack of water.

Vermejo Park Corporation, like the other corporations appropriating water on the Vermejo, purchased its water rights from the early settlers and their subsequent purchasers in the area. The priority dates for the Vermejo Park Corporation are 1873, 1876 and 1878 on the main stem of the Vermejo, 1876 and 1907 for the tributaries, and 1907 for six lakes owned by the corporation. The corporation has 10,000 acre feet of storage rights in the lakes. Pursuant to the decree, Vermejo Park Corporation can take water for its lakes only during a flood. The lakes are used mainly for fishing rather than irrigation because most of the hay production is on the Cimarron rather than the Vermejo.

In the middle of the property owned by Vermejo Park Corporation, Kaiser Steel Company makes its diversions for its York Canyon coal mine. As of May, 1980, Kaiser Steel had decreed rights of 630 acre feet. Of the 630 acre feet decreed to Kaiser Steel, 230 acre feet were acquired from an individual named Messick in perpetuity. An additional 430 acre feet are leased from Phelps Dodge Corporation for a total of 630 acre feet. Kaiser Steel diverts an average of 251.28 acre feet per year out of its decreed 630 acre feet per year. Kaiser has never diverted its full decreed appropriation, although the flow measurements at the downstream Dawson Gauge would indicate that more than enough water is available to satisfy the full appropriations of both corporations. This would appear to be true regardless of which State's figures are used.

Kaiser Steel has priority over Vermejo Park Corporation with all of its leased rights from Phelps Dodge and with part of its purchased rights from individuals. The lease under which Kaiser Steel has acquired some of its water from Phelps Dodge is a 10 year lease with two 10 year extension options. Currently the lease is at the end of the 10 year period and another 10 year extension has been applied for in accordance with the lease. Phelps Dodge has the option to give a three year notice of termination but as of the time of hearing, no such notice of termination had been given by Phelps Dodge to Kaiser Steel.

Under the water rights agreement between Kaiser Steel and Messick, Kaiser Steel is required to return 25% of its diversions under the Messick rights. There was some evidence which indicated that the actual return flow was somewhere around 33% rather than the required 25%.

Kaiser Steel maintains two diversion points for its coal mine. One diversion point is located directly on the Vermejo, while the second is on York Canyon Creek. The York Canyon coal mine uses the water for coal dusting, environmental reclamation and maintenance for the 500 employees working in the mine.

Kaiser Steel has purchased 2000 acre feet of water rights from the Cimarron River for use in the York Canyon mine in the future should such water be necessary. The possibility also exists that Kaiser Steel could purchase other water rights in addition to those it has just acquired on the Cimarron River.

The first diversion of water after the Dawson Gauge is taken by the Phelps Dodge Company. Phelps Dodge has the earliest priority date on the river. Its water rights were also purchased by the corporation from individual water rights holders. Phelps Dodge currently owns 694 acre feet of water rights. Of these 694 acre feet, Phelps Dodge has leased 400 acre feet to Kaiser Steel. The remaining 294 acre feet are used by the C. S.

Springer Cattle Company. Phelps Dodge has leased the land and water rights to the cattle company. Under the decree, Phelps Dodge has the right to irrigate 501.19 acres of land. Of the 501.19 acres, 200 have been leased to Kaiser Steel. Only 150 acres of the remaining 300.19 are irrigated by the cattle company.

Beneath the Phelps Dodge diversion, water is available for stock ponds. These ponds are small and usually contain less than 10 acre feet per pond. Such ponds are not administered or limited in number in New Mexico. The number of stock ponds is significant and accounts for a substantial depletion of the Vermejo's flow.

A final diversion of the waters of the Vermejo is taken by the Vermejo Conservancy District. The District is comprised of 60-65 farms. The diversion structure of the District is capable of diverting 600 cubic feet per second. Water is delivered through a 70 mile system of canals and laterals.

The Vermejo Conservancy District is the largest user of Vermejo water in New Mexico. The Vermejo is not, however, the only source of water for the District. Approximately ⅓ of the District's water supply comes from the Chico-Rico system which also originates in Colorado.

In the early 1950's, the District was part of a large reclamation project. Although doubt about the effectiveness of the project was expressed from the start, the project was still completed. The projected impact and effect of the project have never been realized. The passage of time has confirmed the fact that the project should never have been built. The District has not made any payments for the project for many years. Unfortunately, the project is a failure in spite of the tremendous outpouring of money, effort and time. At no time in the history of the project has the full amount of acreage to be irrigated under the project been irrigated.

The system of canals used to transport the water to the fields is inefficient, resulting in a water loss which can run as high as 33%.

Initially, grains were the main crop in the District, but now the farms support mainly oats and alfalfa.

Most of the farmers in the area are employed in other jobs in addition to maintaining their farms. The jobs held by these farmers are mainly full-time jobs, although some do hold part-time jobs.

II

EQUITABLE APPORTIONMENT

Apportionment of an interstate river is a question which has come before the Supreme Court on numerous occasions. Each case is unique with its own set of facts to be considered. The Court has held before that it will not exercise jurisdiction over a suit between two States unless the invasion of rights is one of a "serious magnitude." Hinderlider v. La Plata Co., 304 U.S. 92 (1938). The question of an apportionment of the Vermejo River is one of serious magnitude to both Colorado and New Mexico and is within the Court's original jurisdiction.

When resolving controversies between two States regarding an interstate river, the Court has applied the doctrine of equitable apportionment. Simply stated, the doctrine says that each State is equal to all of the others, and as quasi-sovereigns, each State is entitled to a share of a river flowing between them. Each is entitled to benefit from the interstate river flowing within its borders.

A review of the cases adopting the doctrine is helpful in analyzing the dispute between Colorado and New Mexico.

KANSAS v. COLORADO, 206 U.S. 46 (1907)

The case which first established the doctrine of equitable apportionment is Kansas v. Colorado. In that case, the State of Kansas was suing the State of Colorado, seeking a prohibition against the use of Arkansas River waters by Colorado. It was the contention of Kansas that it was entitled to the full, natural flow of the river by virtue of prior appropriation. Kansas also alleged injury to the State and its inhabitants. The Court rejected that contention, saying that if the premise espoused by Kansas were correct, then Kansas itself would not be entitled to divert much water for irrigation because it would be required to send the natural flow of the river on to the next downstream state.

In further denying the position urged by Kansas, the Court considered other factors which are pertinent to the case now pending before the Special Master.

Both the Vermejo and the Arkansas Rivers have varying flows dependent upon the time of the year. Due to their origin high in the mountains, snow melt is the main source of water for both rivers. Thus, as the Court has noted:

> . . . [T]hat there is a great variance in the amount of water flowing down the channel at different seasons of the year and in different years is undoubted; that at times the entire bed of the channel has been in places dry is evident from the testimony. In that way it may be called a broken river. But this is a fact common to all streams having their origin in a mountainous region, and whose volume is largely affected by the melting of the mountain snows.

New Mexico claims injury to established economic interests

in the same manner that Kansas claimed such an injury. Even though the Court acknowledged that some injury would accrue to Kansas, it still looked at the valley as a whole and noted minimal injury to the valley when viewed in that manner. The same type of situation exists in this case. Of the four major diverters of Vermejo water in New Mexico, the Vermejo Conservancy District would be the one most affected by a diversion in Colorado. The other three major users, Vermejo Park Corporation (Pennzoil), Kaiser Steel and Phelps Dodge would be minimally affected, if at all. As the Court stated in Kansas v. Colorado:

> . . . [W]hile the influence of such diminution has been of perceptible injury to portions of the Arkansas Valley in Kansas, particularly those portions closest to the Colorado line, yet to the great body of the valley it has worked little, if any, detriment, and regarding the interests of both states and the right of each to receive benefit through irrigation and in any other manner from the waters of the stream, we are not satisfied that Kansas has made out a case entitling it to a decree.

It should be noted that the facts of this case establish that the Vermejo Conservancy District does not have an economically feasible operation. There is no competent evidence which would indicate that the District will ever be able to meet its debts and live up to its expectations, and for this reason, the impact of a Colorado diversion on New Mexico users, as a whole, would be minimal.

WYOMING v. COLORADO, 259 U.S. 419 (1922)

The second case in which the Court discussed equitable apportionment was Wyoming v. Colorado. The controversy arose when Wyoming sued Colorado to prevent a proposed diversion by Colorado of the waters of the Laramie River, an interstate

river flowing between the two States. The diversion in question in the case was a proposed transmountain diversion by two Colorado corporations. Similarities and differences exist between this case and the current matter before the Special Master.

In Wyoming v. Colorado the Court further explained its opinion in Kansas v. Colorado. The Court noted that the case was a "pioneer in its field." It held that the Court had jurisdiction over "a controversy between two States over the diversion and use of waters of a stream passing from one to the other."

A distinction was made in Wyoming v. Colorado by noting that in Kansas v. Colorado the controversy was between two States with different water policies. Kansas is a riparian State, whereas Colorado has adopted a policy that is in effect in most of the arid west—that of appropriation. Additionally, in the earlier case there was a return flow and the diversion in question was not a future use, but rather had been "practiced for years."

In analyzing the current case between Colorado and New Mexico, the Special Master finds that Kansas v. Colorado is important for two basic principles: First, that the Court has jurisdiction over a case such as this, and secondly, that the doctrine of equitable apportionment was established.

A close reading of Wyoming v. Colorado shows that a similarity exists between that case and the one now before the Master. In both cases, the States involved are in the arid west and both recognize appropriation as their controlling doctrine for water law. Snow melt is the major source of the water proposed to be diverted from non-navigable streams. Proposed, future, corporate diversions are involved in both cases. No return flow can be expected because the water would be transferred by transmountain diversion structures to another watershed.

The arguments of New Mexico in Colorado v. New Mexico

are the same as those given by Wyoming in Wyoming v. Colorado, and are simply stated: If the diversion is allowed, a sufficient amount of water will not be left in the stream to satisfy rights in New Mexico which are prior in time, and thus superior, to those in Colorado. Colorado in turn argues that she is not asking for all of the water which she produces, and that the diversion which she is seeking will leave a sufficient quantity of water in the stream to satisfy existing rights.

The Master notes that in the Wyoming v. Colorado case the Court held that the fact that a diversion is to another watershed is not a reason to decide this case in favor of New Mexico. The principle of appropriation does not require that the diversion and use of the water be in the same watershed where the river is located.

Another factor which the two cases have in common is the lack of concise, complete measurement data. In Wyoming v. Colorado, the Court rejected the use of averages and yearly flows as the means to establish dependable supply. The Court also recognized that the lowest natural flow of the years is not a realistic indicator of the dependable supply. The Court suggested at that time that reservoirs and other conservation measures were appropriate:

> . . . [T]he question here is not what one State should do for the other, but how each should exercise her relative rights in the waters of this interstate stream. Both are interested in the stream and both have great need for the water. Both subscribe to the doctrine of appropriation, and by that doctrine rights to water are measured by what is reasonably required and applied. Both States recognize that conservation within practicable limits is essential in order that needless waste may be prevented and the largest feasible use may be secured. This comports with the all-pervading spirit of the doctrine of appropriation and takes appropriate heed of the natural necessities out of which it arose. We think that

> doctrine lays on each of these States a duty to exercise her right reasonably and in a manner calculated to conserve the common supply.

After analyzing the data provided and the conservation measures applied by the States in Wyoming v. Colorado, the Court concluded that the doctrine of appropriation should be applied. It held that sufficient water was present to satisfy senior Wyoming and Colorado appropriators and still leave 15,500 acre-feet of water per annum for the Laramie-Poudre Tunnel appropriation.

The Court did not apply strict priority in the sense that the project was to receive 15,500 acre feet per annum regardless of the natural flow of the river in any given year.

Although the Wyoming v. Colorado case was more applicable to Colorado v. New Mexico than was Kansas v. Colorado, the case was certainly not the Court's last pronouncement on the subject.

CONNECTICUT v. MASSACHUSETTS, 282 U.S. 660 (1930)

In this case, the State of Connecticut was seeking to enjoin the State of Massachusetts from diverting waters from the Connecticut River for Boston and some other neighboring cities and towns. The diversion in question involved a proposed use and not one already in existence.

In looking at the facts of the case, the Court analyzed Kansas v. Colorado and Wyoming v. Colorado. It reaffirmed its earlier position that the laws of the individual States involved are not necessarily controlling. Instead the Court spoke of an "interstate common law." Part of this interstate common law is the doctrine of equitable apportionment. In further defining this doctrine, the Court stated:

> . . . [F]or the decision of suits between States, federal, state and international law are considered and applied by this Court as the exigencies of the particular case may require. The determination of the relative rights of contending States in respect of the use of streams flowing through them does not depend upon the same considerations and is not governed by the same rules of law that are applied in such States for the solution of similar questions of private right. Kansas v. Colorado, 185 U.S. 125, 146. And, while the municipal law relating to like questions between individuals is to be taken into account, it is not to be deemed to have controlling weight. As was shown in Kansas v. Colorado, 206 U.S. 46, 100, such disputes are to be settled on the basis of equality of right. But this is not to say that there must be an equal division of the waters of an interstate stream among the States through which it flows. It means that the principles of right and equity shall be applied having regard to the "equal level or plane on which all the States stand, in point of power and right, under our constitutional system" and that, upon a consideration of the pertinent laws of the contending States and all other relevant facts, this Court will determine what is an equitable apportionment of the use of such waters. Wyoming v. Colorado, 259 U.S. 419, 465, 470.

The equities of these cases require that the Master consider many factors, not just the law of the States involved. Thus, although appropriation is an important factor to be considered, the Master must also consider other factors such as whether or not there is "real or substantial injury or damage."

The Court held that Massachusetts was entitled to some of the water from the river, although it also made it quite clear that the amount of water which could be diverted by Massachusetts from the river was not unlimited. The fact that the water was for a future use and of a later priority than some of the uses in Connecticut did not deter the Court from awarding some of the water to Massachusetts.

NEW JERSEY v. NEW YORK, 283 U.S. 336 (1931)

Here, the Court again reaffirmed the principle of equitable apportionment in interstate river cases. New Jersey was praying for an injunction against diversions from the Delaware River and its tributaries for a future water supply for the City of New York.

The Court noted that New York had the power to restrain all of the water within its jurisdiction, but that such action would be unacceptable. It held that the lower State could not reasonably expect the upper State to send the undiminished flow of the river downstream. Both States "have real and substantial interests" in the waters of an interstate river.

The Court also reaffirmed the principle that the removal of water to a different watershed was not a reason to deny water to New York.

After analyzing the evidence in the New Jersey case, the Master concluded that the diversion would not materially affect the use of the river for industry and agriculture and the Court affirmed this position.

WASHINGTON v. OREGON, 297 U.S. 517 (1936)

At first reading it would appear that the case of Washington v. Oregon answers the questions raised by Colorado v. New Mexico. Unfortunately, simplicity is never the rule in cases between two States, and the current matter is no exception. Although the Washington v. Oregon case is somewhat helpful, it is distinguishable, particularly in light of subsequent cases bearing on the same subject.

The State of Washington filed a complaint charging that the State of Oregon was wrongfully diverting the waters of the

Walla Walla River. The Walla Walla is a non-navigable river which arises in the Blue Mountains of northeastern Oregon. The river splits into two branches at the Red Bridge in Oregon. One of the branches is the Tum-a-lum, while the other is the Little Walla Walla. The Tum-a-lum was the river the Court was concerned with in the case. Both States are semi-arid in that area and the waters of the river come mainly from snow melt. Appropriation is recognized by both States.

During periods of low flow, Oregon had been diverting, without interruption, the waters of the Tum-a-lum. After considerable discussion about priorities and damages alleged to have been sustained, the Court concluded that no real reason existed to require Oregon to turn the water past the Red Bridge in a vain attempt to have the water reach Washington. The nature of the channel of the Tum-a-lum was such that the water would sink into the ground and would never reach Washington. It made no sense to sacrifice some of the existing benefits in Oregon for a complete lack of corresponding benefits in Washington. In an attempt to show damage, Washington alleged that its Garden Farms District was suffering damage due to the diversion of the water by Oregon. As the Court pointed out, however, the District started its project with knowledge of the Oregon appropriations. During periods of shortage there would be no water available at the canals of the District if the Court had ordered Oregon to send some of the water past the Red Bridge. Without any evidence of damage of a serious magnitude or of a corresponding benefit, equity would not have been served if the Court had ordered Oregon to release water down the Tum-a-lum channel during periods of low flow.

In distinguishing the Washington v. Oregon case from Colorado v. New Mexico, the Master notes that each equitable apportionment case is unique with its own set of facts to be considered by the Court. Priority of appropriation is one of the

main factors to be considered, although it is not conclusive. Connecticut v. Massachusetts, and Nebraska v. Wyoming.

There is no dispute that Colorado has never diverted water from the Vermejo. An inchoate water right belonging to C. F. & I. Steel Corporation is the proposed use for any diversion Colorado might receive. If the Master were to apply the doctrine of appropriation as it is applied in these two States, Colorado would not receive any Vermejo water. To so hold would permit one of the factors used in making an equitable apportionment to destroy the guiding principle itself. Carried to this extreme, priority of appropriation would prevent an equitable apportionment from occurring.

The diversion requested by Colorado would take approximately one half of the water produced in that State. Any damages to New Mexico must be weighed against benefits which will accrue to Colorado. C. F. & I. Steel Corporation is a major employer in southern Colorado and northern New Mexico. The proposed use to which C. F. & I. would put the water would have economic repercussions throughout the economy of the area.

HINDERLIDER v. LA PLATA CO., 304 U.S. 92 (1938)

In this case, the State of Colorado challenged an interstate compact negotiated between Colorado and New Mexico with the consent of Congress. The case came before the Court after the Supreme Court of Colorado made the determination that Colorado water rights were vested property rights which could not be taken away by an interstate compact. Although the Supreme Court agreed that water rights are property rights, the Court also stated that water rights are only "indefeasible so far as concerns the State of Colorado, its citizens, and any other person claiming water rights there."

The Court went on to hold that regardless of priority of right Colorado was only entitled to an equitable portion of the interstate river and could only confer water rights to the extent of her equitable share.

Compact negotiations were attempted between Colorado and New Mexico regarding the Vermejo River, but these negotiations were unsuccessful.

Hinderlider is important because it reaffirms the Court's position that the doctrine of equitable apportionment is still the guiding principle, even though senior appropriators in one or both states may be damaged.

COLORADO v. KANSAS, 320 U.S. 383 (1943)

The second case involving the Arkansas River commenced in 1943 when Colorado filed a Complaint against Kansas seeking an injunction against further lawsuits by Kansas users against Colorado users.

This sequel to the pioneer case of Kansas v. Colorado sheds little light on the problems confronting the Master in this matter. The issue in the second case can be easily summarized: Could Kansas establish that she was now seriously damaged by increasing Colorado diversions? The Court again answered this key question in the negative as it had done in the original landmark case of Kansas v. Colorado. In coming to this conclusion the Court considered many factors such as ground water, return flow, and an increase in irrigated acreage in Kansas despite Colorado diversions. None of these factors are relevant to the current action because there is no ground water to speak of, there is no possibility of a return flow as the Colorado diversion would be to another watershed, and there is no evidence in the record

which indicates that the amount of irrigated acreage in New Mexico is increasing.

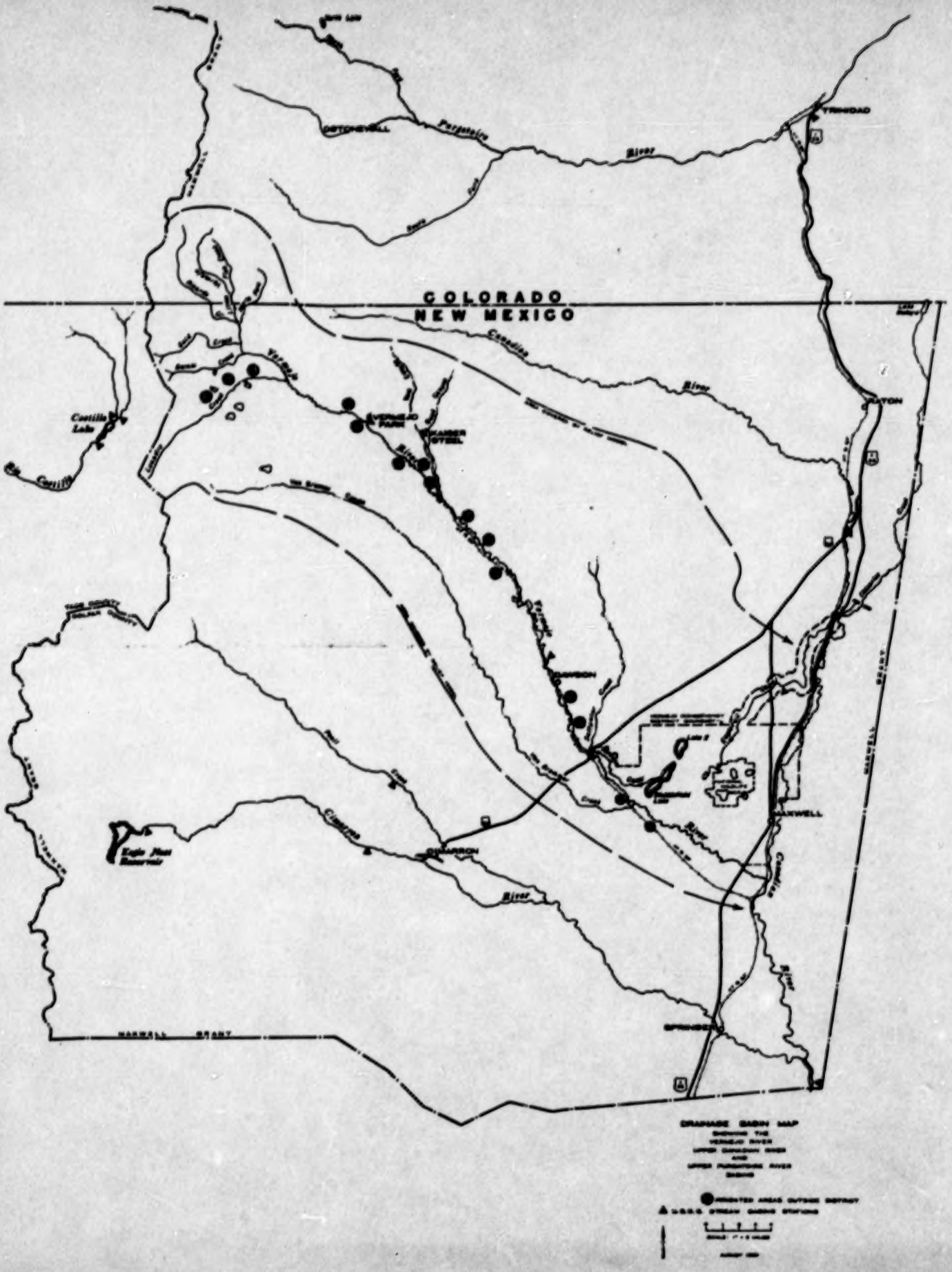
However, two points which were made in Colorado v. Kansas are still relevant in Colorado's suit against New Mexico. The first point highlights a theme common to all of the Court's equitable apportionment cases. Simply stated, the burden of proof on a complaining State "is much greater than that generally required to be borne by private parties."

The second point of major importance to be gleaned from the second adjudication of the Arkansas River is that average annual flow data is often not very helpful in determining the availability of a dependable supply, particularly if the averages include flood waters. Flood waters are generally largely unusable due to the inability of most diversion works to handle them, and also because of the sand and debris which they contain. Both Colorado and New Mexico used average flows in their testimony and exhibits before the Special Master.

NEBRASKA v. WYOMING, 325 U.S. 589 (1945)

In 1934 Nebraska brought suit against Wyoming seeking an equitable apportionment of the waters of the North Platte River. Colorado was impleaded as a defendant in the action and the United States intervened. Nebraska alleged that Wyoming and Colorado were diverting more water than that to which they were entitled, violating both the principles of equitable apportionment and priority of appropriation.

In determining whether or not the controversy came within its original jurisdiction, the Court noted that the case involved a situation in which "the claims to the water of a river exceed the supply." Although analogous to a private suit in which two parties are vying for the same parcel of land, the Court noted that


COLORADO
NEW MEXICO
TRINIDAD
RATON
SPRINGER
CIMARRON
RIVER
CANADIAN
RIVER
CANTON
SPRINGS